DEC 6 1
UNIV. OF MICH.

The JOURNAL of GEOGRAPHY

A Monthly Magazine Devoted to the Interests of Geography in Elementary, Secondary and Higher Schools

RAY HUGLEY WHITBECK
Of the Department of Geology and Geography of the University of Wisconsin

VOLUME XVI DECEMBER, 1917

CONTENTS

Suggestions for Teaching Elementary Geography

The Food Surplus of South America [illegible]
War

The Use of Geographic Materials

Wheeling, West Virginia. (Map)

The Condition of Geography in the High Schools [illegible]
portunity

Newfoundland

A Test in General Geography

Climatic Notes on the British Isles

Our Foreign Trade After the War

The Growth of the Mining and Metal Industries [illegible]

News Notes

Chicago Geographical Meetings

Meeting of Wisconsin Geographic [illegible]

Geography in Illinois

Geographical Activities in New England

Authors Are Responsible for Statements in Their Articles

$1.00 a Year THE JOURNAL OF GEOGRAPHY

Editorial Office—The University of Wisconsin
Send subscriptions and all correspondence relating to manuscripts [illegible]
Entered as second class matter [illegible]

The Journal of Geography

Published Monthly Except July and August

Successor to the Journal of School Geography, Vol. V, and the Bulletin of the American Bureau of Geography, Vol. II.

Editor
RAY HUGHES WHITBECK.

Of the Department of Geology and Geography, University of Wisconsin.

Contributing Editors, 1917-18

ISAIAH BOWMAN, Director of the American Geographical Society, New York.

ALBERT PERRY BRIGHAM, Professor of Geology, Colgate University, Hamilton, N. Y.

JAMES F. CHAMBERLAIN, Professor of Geography, State Normal School, Los Angeles, Cal.

GEORGE E. CONDRA, Professor of Geography, University of Nebraska.

RICHARD E. DODGE, Washington, Conn.

WILLIAM M. DAVIS, Cambridge, Mass.

PHILIP EMERSON, Principal Cobbet Grammar School, Lynn, Mass.

N. M. FENNEMAN, Professor of Geology, University of Cincinnati.

WILLIAM M. GREGORY, Professor of Geography, Normal School, Cleveland, O.

J. PAUL GOODE, Associate Professor of Geography, University of Chicago.

MARK JEFFERSON, Professor of Geography, State Normal College, Ypsilanti, Mich.

A. E. PARKINS, Professor of Geography, Peabody College for Teachers, Nashville, Tenn.

C. J. POSEY, Assistant Professor of Geography, University of Minnesota, Minneapolis.

EDWIN J. SAUNDERS, Assistant Professor of Geology, University of Washington, Seattle.

ROBERT DeC. WARD, Professor of Climatology, Harvard University.

Contributing Editor for China, WALTER N. LACY, Anglo-Chinese College, Foochow, China.

Contributing Editor for Great Britain, GEORGE G. CHISHOLM, Lecturer in Geography, University of Edinburgh, Scotland.

Rules of Publication

PRICE—The subscription price is one dollar a year, payable in advance. Fifteen cents a copy.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Hawaiian Islands, Philippine Islands, Guam, Porto Rico, Tutuila and Samoa. Add 10 cents postage for Mexico and Canada. For all other countries in the Universal Postal Union add thirty cents for postage.

CHANGE OF ADDRESS—When a change of address is ordered, both the new and the old addresses must be given. The notice should be sent ten days before the change is to take effect. Subscribers who fail to give notice of change are responsible for payment for all copies sent until notice is received. The post-offices do not forward second-class mail matter. Subscribers who do not observe this rule will not be sent duplicate copies.

HOW TO REMIT—Remittance should be sent by Check, Draft, Express Order, or Money Order, payable to order of The Journal of Geography. It is, as a rule, safe to send a dollar bill without registering, but sender must assume the risk. Larger amounts should not be sent in cash.

B. A. SINNEN, CIRCULATION MANAGER

APPLETON, WIS.

The JOURNAL of GEOGRAPHY

Volume XVI DECEMBER 1917 Number 4

SUGGESTIONS FOR TEACHING ELEMENTARY GEOGRAPHY

By R. H. WHITBECK
University of Wisconsin, Madison

IT IS extremely doubtful if an agreement could be reached even among geographers themselves, concerning the kind of geographical knowledge or training that is of most value. But there should be no difficulty in determining, in the main, what kind of knowledge is most distinctively geographical, and hence is the particular responsibility of geography. There is no doubt about the kind of material that occupies the middle of the field of geography, but no man living would attempt to say where the outer limits of this field lie.

KNOWLEDGE OF LOCATION

Knowledge of the location of continents, oceans, countries, cities, important rivers, lakes, arms of the ocean, islands, and the various features of the land, is distinctively the province of geography. Such knowledge is almost wholly obtained by working with maps. Map studies are the most fundamental and distinctive phase of school geography. Aside from a limited amount of map knowledge supplied in connection with history, geography is the one and only study which we can hold strictly responsible for equipping students with map knowledge. Here is one clear and undeniable responsibility of geography, and every geography teacher should say to herself: "I accept this responsibility and I will make it my business to meet it."

Now immediately arises the need of a caution, lest place-geography assume an undue prominence, and we go to extremes as did the majority of teachers a generation ago. The mistake that brought the geography of that period into disrepute was undiscriminating emphasis upon place-geography; far too many places were located. One of the important steps in the teaching of place-geography is the selection of the list of places and geographical features which are worthy of mention, and the much smaller list of those that deserve emphasis and review. Every teacher should have her list of minimum essentials in place geography,—either a list carefully prepared by a committee, or, in the absence of that, one prepared by herself. The new courses of study re-

cently issued by several cities, (for example Detroit and Minneapolis) give such lists. One was also published in the Journal of Geography in May, 1917, a copy of which list can be secured for a two cent stamp. *

Now, since the most distinctive responsibility of school geography it to equip pupils with a reasonable knowledge of location, through map studies; and since the achievement of this in a sane and balanced way requires the preparation of an approved list of places and geographical features, it necessarily follows that the compiling of such a list for each grade and each city is one of the first steps toward securing more satisfactory results in school geography.

Elementary Geographical Ideas

Very early in the study of geography pupils begin to need a knowledge of certain words which in an elementary way belong to the vocabulary of geography. Some of these are not exclusively geographical, but the teacher will do well to be sure that they are understood as fast as a need for them develops. The following list is offered as a suggestion; each teacher will wish to modify it somewhat. Most of these terms will be acquired during the first year of actual geography study—usually the fourth grade. Formal definitions are not needed: an understanding of the meaning of the terms, and the ability to use them correctly are the ends to be sought:

Right, left, up, down, north, south, east, west, the semi-cardinal points, earth, air, sky, atmosphere, soil, wind, land, sea, cloud, dew, fog, a gas, a liquid, a solid, heat, cold, temperature, thermometer, hour, day, week, month, year, decade, century, sun-rise, sun-set, new moon, full moon; village, city, town, township, county, state, nation, creek, river, lake, bay, strait, sea, gulf, ocean, harbor, port, hill, valley, slope, mountain peak, mountain range, mountain pass, island, peninsula, isthmus, cape, plain, continent, shore, and such local features as can be shown; axis, poles, equator, parallels, meridians, latitude, longitude, prime meridian.

Home Geography and the Geography of Distant Lands

Our courses of study usually start geography with so-called home geography. The practice is based upon sound pedagogy in that it utilizes the geographical materials and opportunities at hand, and affords the advantage of studying real things, rather

* Address Journal of Geography, University of Wisconsin, Madison, Wis.

than studying about them. Yet, if the first year of geography were confined to home geography, it would prove a dull and disappointing year. Parallel with it must go quite the opposite kind of geography—a study of remote and strange peoples and their lands. There is scarcely a child interest that is deeper than this interest in peoples beyond the sea,—people who live in tents and ride on camels; people who wear wooden shoes, or who drive dog teams, or hunt with bows and arrows. There is a fascination in hearing about the people of China, Japan, India, Arabia, or Mexico;—in fact, about any people whose mode of life is strange, and hence quite wonderful.

Next to children's interest in people across the sea is their interest in knowing where things which they eat, use, wear, or possess come from; how they are obtained or produced, and how they reach us; this applies especially to things which come from far-away lands.

One of the most effective ways of leading up to the study of any country is through a study of some familiar thing that has come from that country. The more fully teachers can make geographical knowledge a means of explaining things that the children have a natural interest in, the more eagerly will children seize that information. The whole geography of the Sahara can be gathered around the story of a box of dates:—the long sea-trip from the Mediterranean, the caravan journey across the desert, the palm groves of the oasis, the dry and thirsty land with its terrible sand storms, the great value of water, the wonderful adaptation of the camel, the robber tribes and their desert code of honor,—all these are inherently interesting.

The story of a banana carries us in a fruit steamer southward into the tropics, to a plantation in Jamaica or Costa Rica, or Colombia, to lands where snow never falls, and even a frost is unknown, where the trade winds blow, where dawn and twilight are very short, and the longest day or night is but little longer than the shortest.

A lead pencil leads us to the graphite mines and rubber plantations of Ceylon; a silk ribbon to the mulberry groves, and the bamboo houses of Japan; a cork to the cork-oak forests of Spain or Morocco; a cube of sugar to the plantations of Cuba; a bar of chocolate to Ecuador, and so on. Every one of these journeys calls the map into use; ideas of distance are acquired, and climatic belts assume significance. Most of this geographical knowledge is greeted with a welcome because it explains things in which people are interested. Thus geography takes on an

aspect of usefulness in the child's world. In the language of the pedagogue, "this sort of knowledge functions in the child's life."

European countries possibly are not quite so interesting as many other foreign countries, largely because the people are more like ourselves, live much as we do and produce the same things that we do. One method of approach to European countries is through finding out the various countries represented by the families of the children. It is not unusual in an American city school to find children representing a dozen foreign countries. Some children can supply information gathered from parents, telling of life in Italy or Hungary or Scotland or Ireland; telling of the journey to America, and other matters, all of which contribute to making geographical studies realistic. The purely bookish quality is removed and maps become useful things.

Such a procedure requires that the teacher have a plan for finally rounding up the knowledge which has been thus gained in a more or less systematic way. In fact, the text book is a necessary supplement to be used parallel with the studies suggested above.

While the ultimate object of geography teaching is to help in producing an enlightened citizenship, the immediate aim is to make people intelligent about the lands and peoples of the earth, and to implant an abiding interest in these lands and peoples—an interest which will reach beyond school days.

Acquiring a Sense of the Common Units of Distance

Ideas of size and of distance as well as of location are an essential part of early geographical studies. There is a difference between knowing distance (for example, that Chicago is 1,000 miles from Boston) and sensing distance. The latter can be achieved by children for short distances only, and even this restricted sensing of distance must be achieved by gradual steps. This is as much an exercise in arithmetic as in geography, and is usually done in an arithmetic class.

1. Learn (by measuring) the size of the class room—length and width and height, in feet.
2. Learn the length of the frontage of the school grounds on the street, in feet.
3. Learn the length of the block in which the school is located (in feet, yards and fraction of a mile.)
4. Select convenient points one mile from school (with school as center and with a radius of one mile, draw a circle on a map of the city or village.) Most of the pupils will find it convenient to walk this distance, timing themselves.

5. Learn the distance between certain selected points in the city or outside; if possible, points with which most of the pupils are familiar. In rural districts, rods and acres will also be employed.

There is an obvious value in knowing certain distances as a means of better appreciating other distances which are frequently mentioned both in and out of the geography class. For instance, a thousand-mile railway journey is mentioned; if the pupil knows that the distance across his state is 200 miles, he can appreciate that a thousand-mile journey is equivalent to crossing five states like his own. The ability to understand distances is helped by having in mind some familiar distance as a measuring stick, such as the width of a state or the distance between two familiar cities. It helps a little to know that Boston is about as far from Washington, or Chicago from Buffalo, as Berlin is from Paris.

6. Know the distance in miles from the home city or village to a few nearby places.
7. Know the length and breadth of the home state.
8. Know the area of the home state in square miles.
9. Know the speed of an ordinary passenger train (say 30 mi. an hr.) and of an express train (say 40-50 mi. an hr.)
10. Know the train time required to cross the home state (use actual time tables.)
11. Know the distance and train time between the home city and the largest city in the region, say New York, Chicago, or Denver.
12. It is worth knowing that it is about 1,000 miles by railroad between Boston and Chicago; between Chicago and Denver; and between Denver and San Francisco: (4 or 5 days between Atlantic coast cities and Pacific coast cities.)
13. It is worth knowing that the sailing distance between New York and England is about 3,000 miles (same as railroad distance between New York and San Francisco) and 5 or 6 days by fast steamer; and from San Francisco or Seattle to Japan, about twice the distance.

There are a few other numerical facts that may be known with profit, such as:

14. The number of pupils in the room and in the school; the population of the home city, state, and the United States (always in round numbers.)
15. The diameter and circumference of the earth.

16. Perhaps the moon's distance from the earth (not quite ¼ million miles) and the sun's distance (nearly 400 times the moon's distance.)

These are, of course, not all to be learned at once, but the first ten will be learned during the first year of geography (4th grade) and the remaining ones later.

Doing as Well as Learning

A fundamental trait of childhood is the love of making things and doing things, and collecting things. This trait is so deep-seated and so universal, that it would be inexcusable not to make use of it if it can be turned to advantage, as it can be in geography. Map drawing and sketching, filling in outline maps, locating cities upon the outline maps, and coloring maps, may all be profitable activities when purposefully directed by the teacher. They are not mere busy-work; they may be just as productive of educational results as any part of the school work. This leads to one of the most distinctive types of work in school geography:

The Using and Making of Maps

No phase of school geography gives more permanent results than working with maps. Facts which we work out with effort —even though the effort is slight—are thereby impressed more lastingly. Moreover, by studying maps, map pictures become impressed upon the mind; and they prove to be about the most valuable legacy we get from school geography.

When we read or think of the Suez Canal or of New Zealand, for example, what mental picture, if any, arises? Not a picture of the Suez Canal itself, which we have never seen, but a recalled picture or map of it. When we pause to think of New Zealand, what do we see? It is a map of New Zealand. Perhaps you live in Massachusetts, or Illinois, or California; yet when you picture your state as a whole, you picture it as the map shows it. The mind can picture the Palisades, or Niagara, or the capitol at Washington, if you have seen them, but no one ever saw a state or country in its entirety, and so he cannot call up a mental picture of it; but he can call into consciousness a map-picture of it. So must it be with all geographical areas of large size.

Map Sketching

Effective geography teaching calls not only for map study, but also for map sketching and map drawing. Text books usually provide map questions. The teacher may use these or not as she sees fit, but to slight map questions is a mistake. Any pupil

who has completed the study of South America, for example, should be able to sketch quickly the outline of the continent, sketch in the three main river systems, show the relative positions of the different countries, locate about ten of the principal cities, and show the situation of such important regions as the coffee belt of Brazil, and the nitrate lands of Chile. Africa is easy to outline; its four large rivers should be known; Egypt and the other Mediterranean countries, the pyramids, the Assuan dam, Cairo, Alexandria, Cape Town, Victoria Falls, and a few other places and natural features should be placed upon the map (from memory) with a fair degree of accuracy. Asia is difficult and possibly not entitled to the amount of drill that would be required to enable pupils to sketch it from memory.

North America and Europe are not easy to sketch, but they are of such importance that the practice necessary to enable pupils to draw recognizable maps of them is warranted. In the case of North America the sketch map should show the position of the Mexican boundary, the Great Lakes, the St. Lawrence River, and the rest of the Canadian boundary; the Mississippi, Missouri, and Ohio rivers; the Columbia, the Colorado and the Arkansas; the Hudson, Delaware and the James; the position of Alaska, Cuba, Porto Rico, and the Panama Canal. Such a map may not be accurate enough to locate cities upon; for this purpose it usually is better to use the printed outline maps if they can be had. On these, pupils ought to be able to locate at least thirty important cities. * In addition, a few locally prominent cities in the home state and in neighboring states may properly be included.

Europe is the most difficult to draw. Before attempting to sketch it from memory considerable practice is necessary with the printed map as a guide. On the map thus sketched, the pupil should be able to locate approximately the boundaries of the several countries, to name the principal coast waters, and to locate the Thames, Seine, Rhine, Danube and the Volga. For drill in placing cities the printed outline map is desirable. **

Map Drawing. There exists some difference of opinion among teachers regarding the value of drawing maps with pains-

* **Suggested list.** Boston, New York, Philadelphia, Baltimore, Washington, Richmond, New Orleans, Cincinnati, Pittsburg, Cleveland, Buffalo, Detroit, Chicago, Milwaukee, St. Paul, Minneapolis, St. Louis, Kansas City, Denver, Salt Lake City, Seattle, San Francisco, Los Angeles, Toronto, Montreal, Quebec, Winnepeg, Vancouver, Vera Cruz, Mexico, and Havana.

** **Suggested list of Europeon cities.** Liverpool, London, Paris, Marseilles, Madrid, Lisbon, Genoa, Rome, Venice, Budapest, Athens, Constantinople, Vienna, Berlin, Hamburg, Rotterdam, Antwerp, Petrograd, and Moscow. A longer list would not be unreasonable.

taking care. Some good teachers do not believe in the practice at all; others approve of a small amount of such work, and a few believe in it heartily. As a boy in school I did a great deal of map-drawing both with and without constructing a net of parallels and meridians. My deliberate opinion is that I profited by the practice; it was thoroughly enjoyable and I am still convinced that it paid. Undoubtedly the amount of time to be devoted to careful map-drawing should not be large, but there seems good reason for recommending that a few maps be drawn to the very best of the pupil's ability; maps in which he takes a just pride when they are finished. We must not lose sight of the fact that pupils find a genuine mental exhilaration in doing a good piece of hand work. It is a form of self-expression which is often a means of materially strengthening the interest of certain pupils in geographical study.

(Concluded in January.)

Prosperous Japan

Never in her entire history has Japan been so prosperous as she is today. Never were her factories busier or the volume of her foreign trade larger. She has taken advantage of her comparatively neutral attitude in the world war and her strategical position in Asia, and has not only almost monopolized the markets of the Far East, but has exerted all of her energy to build up a foreign commerce with every country on the globe. She is sending trade commissions to every land, establishing new steamship routes to Russia, to China, to Australia, to South and North America, to Africa, to Europe, to India, the South Sea Islands, and all the time her shipyards are rushing work on new ships to handle the business when it is fully developed. Japan is progressive, full of energy, and thoroughly alive to the importance of her foreign trade.

Japan's New Experiences With the Cost of Living

The cost of living is constantly rising in Japan while wages remain practically at the same level as four years ago, and the Japanese people are beginning to wonder whether the present period of prosperity is going to be an unmixed blessing after all.

According to the monthly report of the Bank of Japan, just out, the price of commodities witnessed another sharp rise during July. The increase over June amounted to 9 per cent while the advance over the corresponding month last year comes up to 41 per cent. Further, as compared to the pre-war period, viz., July, 1914, the net increase in the price of commodities or cost of living comes up to 66 per cent.

THE FOOD SURPLUS OF SOUTH AMERICA AVAILABLE IN TIME OF WAR

By G. B. Roorbach
University of Pennsylvania, Philadelphia

FOR many years the United States held the leadership as a supplier of food to Europe. The greatness of our agricultural resources and the sparseness of our population gave the United States an enormous surplus. With the growth of our population and the development of our manufacturing industries that surplus has steadily decreased. Argentina, Russia, Australia and New Zealand have come to take the place of the United states in supplying to Europe many of the staple foods in which the United States formerly held undisputed sway. Not only this, but in recent years we have witnessed a "carrying of coals to Newcastle." The greatest corn growing nation in the world, we have begun to import corn from Argentina. Instead of exporting large quantities of beef to Europe, our exports fell to insignificant figures, while beef from Argentina and Brazil has been entering our seaports. Beginning in 1909, we imported 193,000 bushels of corn from Argentina. In 1913, this grew to 880,000 bushels, and in 1914 reached the large total of 16,000,000 bushels, falling, however, to 6,500,000 in 1915, and to 2,000,000 in 1916.

In October 1913, Argentine beef began coming to the United States, and in December of that year 9,500,000 pounds arrived. During the year 1914, we received from the River Plate district 160,000,000 pounds of beef and mutton. These imports declined in 1915 to 100,000,000 pounds; and in 1916, to 26,000,000 pounds.

The importations of these temperate zone products into the United States has naturally raised the question of the ability of South America to supply our industrial Atlantic Coast with the products that we have been receiving from our own Prairie and Great Plain States. That we should receive tropical foods, such as coffee, cocoa, and sugar from this continent, three-fourths of which is in the tropics, is expectable, but that South America could send us corn and beef and mutton at first thought is astonishing. Let us examine the prospects of our obtaining foods from South America in the future; first, from temperate zone South America, and second, from the tropic sections.

Grain. The pampa country of Southern South America constitutes one of the finest grain lands in the world. Although at present it is one of the leading grain growing regions, it is estimated that five times the present area could readily be brought

under cereals, and the yield per acre could be enormously increased. The great food crops of the pampas are corn and wheat, with oats rapidly becoming important. Corn in Argentina, unlike the United States, is grown for export, not to fatten hogs and cattle. The result is that although Argentina has less than one-tenth the area in corn that is found in the United States, the country normally exports four times as much of this grain as the United States. In 1913, 55% of the world's total corn exports, amounting to 189,000,000 bushels, came from Argentina. As to wheat, three other countries surpass Argentina as exporters, but in 1913, 110,000,000 bushels, 13 per cent of the world's surplus, came from Argentine farms, and in the same year, 61,000,000 bushels of oats, or 26 per cent of the world's exports. In addition to Argentina, Uruguay and Chili have a considerable surplus of grain for the markets of the world. If needed, can the United States depend upon Argentine grain fields in time of war?

Freight Rates. Let us note, first, that New York and Philadelphia have been getting Argentine grain more cheaply than they could get Kansas corn or Minnesota wheat. The ocean freight rate on corn from Rosario to New York before the war was from 5 to 5½ cents per bushel. This is equivalent to $2. per long ton. Railroad freight rates from Minneapolis to New York are today quoted at 25.8 cents per 100 pounds, or the equivalent of $5.67 per long ton, nearly three times the rate from Argentina to New York. In fact, corn has been shipped from Rosario to New York at about the same rate as the rail rate from Buffalo to New York. Whether or not corn is sent to the United States depends upon whether or not the Argentine exporter can get a better price in New York than in European markets, and this largely depends upon the demand.

Uncertainty of Argentine Crops. As a dependable source of grain supply in time of war, the following points should be kept in mind in regard to South America: (1) The Argentine grain crop, because of climatic variations, is not a sure one. The corn crop especially varies. In 1911, it was an almost total failure, and again last year there was practically none for export. In fact, last year's cereal crop was so poor that on March 27th, 1917, the Argentine government placed an embargo on the exportation of wheat and flour from the country. This in a year of $2. wheat, and when the demand in Europe was never so great.

Demand in Europe. (2) During this world war, the European nations all demand more grain than ever before, and to supply that market, while Russian wheat is bottled up, calls for all the surplus Argentina can produce. Hence, we find that, in

spite of high prices in New York, corn shipments to New York have declined from 16,000,000 bushels in 1914 to 2,000,000 in 1916.

Labor. (3) The labor question, always a serious one in sparsely populated Argentina, is especially so as a result of the war. The coming of the Italian harvest hand, on whom the Argentine farmer has depended, is prevented, and in South America, as in the United States, the manning of the farms is no easy task, and hence the increase of production while the war lasts is difficult.

While the potential producing power of Argentina is very large, in this time of world war, the actual cereal producing power is curtailed, rather than helped, and because of the great demand in Europe, importations into the United States naturally have fallen off.

Beef. The importation of beef from Argentina and Uruguay has been a more recent development than corn importation. The first shipments came in the fall of 1913; in 1914, they reached proportions of considerable importance, representing nearly two per cent of the total beef production of the United States in that year. The reason for this importation of River Plate beef was, of course, due to the great decline in per capita beef production in the United States, the cheapness of producing beef in Argentina, and the perfection of the refrigerator ship. Since 1907, the export of beef from the United States to Europe has greatly declined until now it is insignificant, while Argentina has become by far the most important exporter. Over four-fifths of the imported beef supply of the United Kingdom is now from the River Plate. The number of cattle, estimated at 30,000,000 in Argentina, is capable of large extension. The country is one of the large areas of the world which, because of its climate, is bound to be a permanent grazing land, and should become more, rather than less, important as a supplier of meat to the outside world. This, however, does not mean that during the next year or two the United States can here get large supplies. We have noted already that with the outbreak of war, exports of beef from the Argentine to the United States fell off enormously just as in the case of corn. The demand in Europe is very great, prices are high, the temptation has been to over-slaughter; hence the number of beef cattle has not increased, and it is probable that this coming year Argentina will be able to supply the world with no larger amounts of beef than it did last year, if indeed it can supply as much. It must also be noted that many of the large refrigeration plants in South America are under the control of the big American packing houses. In times of peace, at least, it was not to be expected that these

houses would send beef to New York or Philadelphia to compete with their own products from their Chicago houses. Whether or not the patriotism of the Beef Trust in time of war will prompt them to any such action, time alone can tell. Past performances do not lend much promise to any such hopes.

Beef in Brazil. A second cattle region that has large possibilities for beef export is Southern and Central Brazil. Already some enormous refrigeration plants have been built in Sao Paulo and other Brazilian States, and big modern cattle ranches have been established, both under the leadership of Americans or American firms. Already Brazil is estimated to have half as many cattle as Argentina. The future of the industry is probably as great as Argentina's. As fast as herds can be increased, transportation facilities created, and refrigeration plants built, Brazil's surplus of beef can be increased.

Beef in Venezuela. A third cattle region of South America is in Venezuela. The great plains of the Orinoco, natural grass lands, could support an enormous number of cattle, within easy reach of New York. They are nearer New York than the Great Plains of our own country, and water transportation would make the freight cost much less than from Kansas City to New York or even from Chicago to New York. But the number of cattle is now small, after the many years of political instability and tropic indifference that has existed in this country. One small English refrigeration plant represents the only development in Venezuela. The future may see this section supplying the United States with meat, but not during this war unless hostilities are very long drawn out.

Tropic Foods. As a supplier of tropic food stuffs to the United States, South America naturally has played a much different role than as a purveyor of grains or meats.

Coffee. Measured in dollars, the largest single export of South America is coffee—valued in 1913 at $259,000,000, ¾ of the world's coffee exports. Of this export, over 2/5 came to the United States, the world's greatest coffee market. This export has steadily grown since the outbreak of the war, rising from 785,000,000 pounds in 1914 to 985,000,000 pounds in 1916, so that we are now receiving more than 50 per cent of South American coffee. The supply of this product from South America can more than meet all the requirements of our nation at war or at peace.

Cocoa. From South America comes 45 per cent of the world's supply of cacao. This food beverage finds one of its largest markets in the United States, and since the outbreak of

the war, our importations have increased from 70,000,000 pounds to 116,000,000 pounds. Some of this has been re-exported to Europe, it is true, but Ecuador, Brazil, Venezuela, and Trinidad can cheaply supply all that is needed in our country.

Sugar. Sugar is a tropical product of unquestionable food value, an absolute necessity. The chief source of our supply lies near at hand in Cuba, which furnishes us with five-sixths of our importations, so that the continent of South America has been of small concern to us as a source of sugar. The coast lands of Peru, Colombia, Venezuela, and Brazil, however, have almost unlimited possibilities of sugar cane production, and under the spur of high sugar prices, new sugar centrals have been built since the war, and our sugar imports from the continent have grown from 44,000,000 pounds in 1914 to 181,000,000 in 1916. This, however, is only a bagatelle in our sugar imports.

Bananas. Aside from these three articles—coffee, cocoa, and sugar—the only other food product from tropic South America of any importance imported into the United States is the $1,000,000 worth of bananas from Colombia.

Will the war cause other tropic crops to come into importance? It does not seem likely. The food producing possibilities of the tropics are enormous, but the population, energy, and organization necessary to develop them are lacking, and cannot be supplied—at any rate not while the energetic nations of the temperate zone are at war. There may possibly be one or two exceptions to this.

Manioc. One of the chief foods of the nations of tropic America is manioc, the substance from which tapioca is made. This is a starchy food, obtained, like the potato, from the tubers of a plant, and equivalent to the potato as a food. Rapidly growing, giving enormous yields with comparatively little effort, it could be made a food surplus for export. In fact, in Brazil there are several factories for the manufacture of tapioca and manioc starch for export.

Rice. In recent years, also, rice culture has been attempted with some success in Brazil and in Peru, but the production to date is insignificant. It is conceivable that with a food shortage in the temperate zone during the war, these and kindred crops might be cultivated for export. The great difficulty is to find sufficient energy and foresight among tropic peoples to do so.

In conclusion, it would seem that the ability of South America to supply the United States with any large quantities of staple foods during the great world war is limited. The grains and meats are demanded in Europe. While they can be brought as

cheaply and quickly to the United States as to Europe, our own supplies make the need less, and it does not seem likely that they can offer us any material aid as long as Europe's needs are so imperative. We are driven back upon our own resources. As for tropic foods, aside from coffee and cocoa, which are not indispensable articles, tropic South America with all its potentialities as a food producer, and although lying at our very doors, can furnish us comparatively little in the way of food supplies. Some sugar and bananas, possibly some manioc and rice, seem to be the limit of tropical South America's contributions to our food problem. Undeveloped even in time of peace, it is difficult to see how in time of a great world war sufficient energy and manpower could be found to solve the great problem of tropic development.

South America's chief contribution to America's food problem must be by indirect means. The *nitrate fields* of Chili, with their invaluable fertilizer, can assist in increasing the production of our own soils. The need of increasing our soil fertility is a vital one and Chili holds one of the keys to our success in the great nitrate fertilizer fields, now so easily reached via the Panama Canal. South America is a large and growing producer of raw materials for our industries. Her wool, hides, rubber, copper, iron, tin, nitrates, are of great importance to our factories —but at present, the United States cannot look to that continent for foods.

The Demand in England for Conscription of Wealth

A great question of national economics which brings up an entirely new fiscal scheme, never before even suggested anywhere in the world, is being discussed everywhere in England, and may develope into a grave political issue. It is the question whether a drastic conscription of British wealth shall be undertaken in order to write off at once the enormous cost of the war so that its burden of debt, with the necessity of heavy taxes for years to come, shall not handicap British industry and enterprise for a generation or more.

The total capital wealth of Great Britain is estimated at from one hundred to one hundred and forty billion dollars by men who are taking part in the discussion, and it seems to be agreed that a levy of 10 to 12½ per cent. on every kind of property, if it could be done practically, would pay off the war debt, which they say would amount to about fifteen billions if the war should end quickly, requiring, roughly, a billion dollars a year for interest payments alone, in addition to other taxation which they say would bring Great Britain's annual requirement of taxation up to $2,500,000,000 a year.

THE USE OF GEOGRAPHIC MATERIALS

By Robert M. Brown
Rhode Island Normal School, Providence

MANY lists of supplementary materials for teaching geography have appeared during the last few years and if the value of these lists may be determined by the reaction of the teachers, the conclusion is inevitable that they are among the most valuable of recently published papers. There is a strong and almost uncontrollable instinct, under the stimulus of the "free or at small cost" phrase which is appended to many items in the lists, to send for the pamphlets, railroad folders or educational exhibits. If these are useful appliances, the teacher adds a new enthusiasm to her work and, however slight the task has been, acquires a broader outlook for her teaching. But, frequently, a hoarding spirit prompts the request and a lack of discrimination in the selection of materials fills the school room with an unusable array of truck.

In view of the generosity of manufacturing establishments througout the country in furnishing educational exhibits to the schools and of transportation companies in distributing their pictures and literature, is it not well for the teacher to cooperate in this beyond the position of a mere recipient? There is the attitude that the teacher pays back to the distributor a bonus in the way of advertising but this, however true it may be, does not justify here in receiving; for the object of her incumbency is teaching not advertising. If, as is likely, her work is confined to a single grade, then the limits of her work are outlined for her. She should not attempt the work of higher grades and she should be protected from the encroachments on her work by the teachers of the lower grades. The continual and persistent progress of any curriculum of geography should be recognized and promoted. It is a waste of time to teach from the same silk exhibit in the third, the fourth, the fifth and the seventh grades. It is a waste of effort for all these teachers to send for and use this exhibit in the same building. Some firms protect themselves from this duplication, but the teaching profession would have been advanced had it instituted the rule rather than have it forced upon them. Such a scheme of collecting is, of course, contrary to the ethical principles of class-room management and it can hardly be justified to the distributors of appliances, many of whom are really donating their samples to the schools. In some schools it is a necessary part of the management to define the bounds of the grade assignment in geography beyond the scanty outline of the course of study and to indicate definitely and con-

cisely in what grades certain educational exhibits should be used. Such a scheme is attempted here; not so much by actually listing exhibits as by outlining the principles to be observed.

How Educational Exhibits May Be Profitably Used

In the beginning work in geography—the home geography of the text books—there are a number of well defined lines of study. Among these may be mentioned the work on land forms in the neighborhood, distant land forms, simple types of life in strange environments and the food, shelter and clothing requirements of the different zones of the earth. The study of neighboring land forms should be observational and calls for little in the way of illustration; distant land forms demand pictures; simple types of life over the earth are best illustrated by pictures and models; food, clothing and shelter study may be enhanced by an educational exhibit of products from which they are manufactured.

In the first stage of making a collection every available picture is frequently cut and filed. As soon however as the collection permits a choice, many of the earlier pictures may be discarded in favor of new ones, but no new picture should be added to the collection unless it excels in some way pictures already on hand or adds a new interest or new light.

The Choice of Pictures

The choice of the picture may be illustrated by a single example. In many schools, in the early grades of geography work, the mountain stands as a type of land forms which cannot be taught from observation. Pictures are necessary. The work is in geography, not in physical geography or geology and this fact is an important element in the choice of studies. The effect of mountains upon mankind, the response which man makes to the mountain environment is the ideal point of view for the grade. Therefore the picture of the sharp peak of the Matterhorn is not so desirable as one which shows a rude cabin nestling on the narrow shelf of some less known peak. Pictures of mountains showing summer resorts, timber reserves and the lumber industry, highway and railroad difficulties, reservoirs, mining and home sites, are best suited for the work at this stage; and if by chance in the same picture with the human response there is illustrated the limitations of the activity through some mountain characteristic, such as height, snow cover, steepness of slope or location, the picture should be the more highly prized. I have seen a collection of mountain pictures for the fourth grade which included the simple folds of the Appalachians, a diagrammatic

representation of the complex folds of the Alps, the block mountains of Nevada and a host of pictures of rocky and snowy peaks. In the whole collection of over a hundred pictures, there were seven which might have been the nucleus of a collection of mountain pictures. The illustrations were good as far as they went but they did not illustrate the lessons which were to be taught. The tendency was to attempt to teach items beyond the preparation of the pupils. In like manner, pictures to illustrate simple types of life over the earth should be selected according to some ideal of teaching. Magazine pictures of people, in many instances, emphasize facial characteristics, ethnological traits and fashions or especially with amazing frequency the adornments of the body of the people of simple types of culture. Such pictures are not the best choice for elementary studies of life relationships. The pictures should show an adaptation to environment and should illustrate the industry, the play or the home life of the people in terms of climate, vegetation, topography and the like. The home-made model of an Eskimo or Indian village, while it is largely diagrammatic, has teaching qualities for a fourth grade that can hardly be equalled by pictures. I have seen the little folks of Jane Andrews' "Seven Little Sisters" very effectively portrayed in models and used in interesting class exercises.

Selecting Materials Wisely

It is an advantage to have exhibits to give interest to the teaching of lessons on food, clothing and shelter. The teacher's task here is to select wisely the illustrative materials for the grade. She does not need a pencil exhibit, a graphite exhibit or a spice exhibit; the flour exhibit is hardly suitable for this grade, yet certain parts of it have a bearing on the work. As a rule such an exhibit might well be left for later work; but the suitable parts of it might be used, if it can be so done without destroying the effectiveness of the original exhibit, to make an illustrative exhibit for the use of this grade. Where educational exhibits are usable in the succeeding grades, a school officer or a group of teachers might easily assign the exhibits so as to avoid duplication. A rubber exhibit can be used in the fifth grade (Brief Study of the World) and again in the sixth or seventh (South America). If the supervision is not careful, the work is repeated, the same method and the same illustrative materials being used in the two grades.

It frequently happens that the teacher overlooks the advantages of her home locality in her search for educational materials. I know a teacher who sent for every item marked "free"

in the first list published by the Journal of Geography without any thought that a judicious selection was entailed, or that more valuable material was available at home. A home-made exhibit can be very effective and oftentimes it will surpass the exhibit assembled merely for advertising purposes. Furthermore, such an exhibit gives an impetus to the study of home geography and helps to remove it from the list of book studies which anomolous condition it has, in too many instances, reached. Most staples taught in two or more grades yield enough material to form a graded series of exhibits corresponding to the advancing stages of the development of the subject. For instance, in the earliest grade a cotton exhibit might comprise a cotton plant showing stem and ball, pictures of a cotton field ready for the pickers, samples of cotton seed and a few manufactured articles, depending on the industries of the school neighborhood; later, when the brief survey of the world is undertaken, the life of the people in the cotton belts becomes the emphasized feature around which the exhibit can be built, and finally in the intensive study of the United States the emphasis is placed on the manufacturing of cotton goods including the by-products. In mounting, a uniform size of white cardboard, 22 by 14 inches (one-half of the ordinary commercial board) is used, and the lettering may be done with a rubber stamp or more effectively with the cut letters on sale by many stationers. So varied is the manufacturing in a state like Rhode Island that nearly every important product studied in the geography course in the grades has its local setting to give interest and vividness to the teaching. Such illustrations are more in accord with the intent of the work in lower grades than many of the advertised educational exhibits—pencil, pen, graphite, glass, carborundum, and malted milk exhibits, to name a few.

In the later grades when problem work is in full sway or where economic, physical or commercial geography has a place, the more unusual exhibit may be used. There should begin and, if the course is long enough, there should be a fairly thorough use of a wide range of simple original sources, as government publications, atlases, commercial reports, and so on. Many teachers have acquired sets of stereographs and after the newness has worn off, these excellent pictures have been pushed aside largely because the plan of using them furnished by the sale agent is a diversion, desirable now and then, perhaps, but not adapted to the time limits of many geography lessons.

In the use of the problem method of study in upper grades, a more extensive use of the stereograph, as illustrative material, is

possible if the teacher assigns some of the questions for study with reference to such of the photographs as she has on hand. This avoids the expense of the entire class having the same picture at the same time or the waste of time resulting from the advised plan of passing a picture around the class during the recitation period in order to discuss it.

Most geography teachers have an immense amount of apparatus of one kind or another at hand. There is danger of being swamped with it, or of using a new thing for a day and then storing it. How many teachers order globes and after a great display leave them to gather dust in some dark corner of the closet! A study of the use of illustrative material ought to precede the ordering of it. Can you in your grade justify the use of every thing that you have collected?

WHEELING, WEST VIRGINIA*

By Helen M. Garden
Wheeling Public Schools

The City's Setting

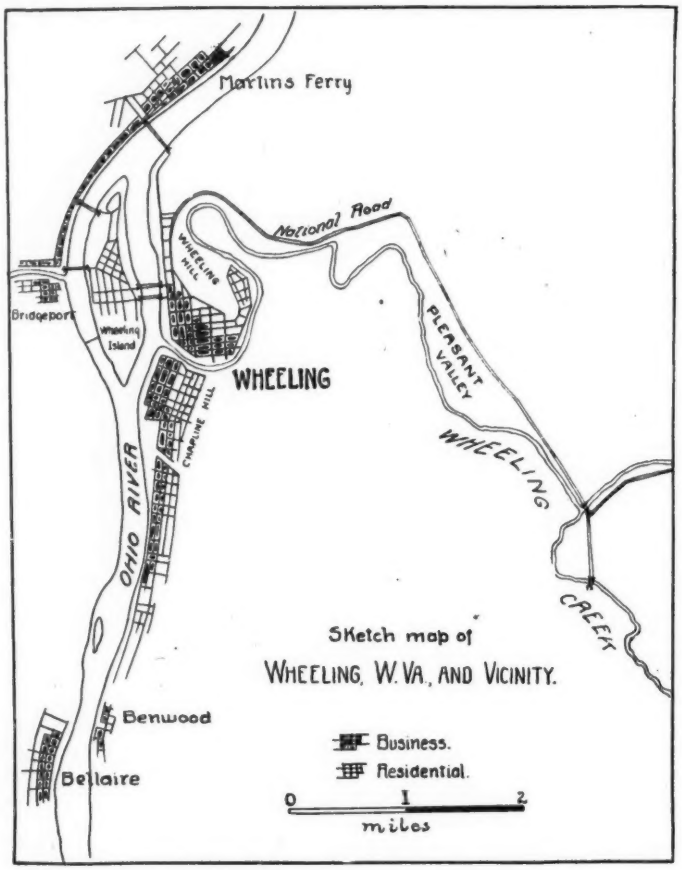
WEST Virginia in outline has roughly the shape of a pan with two handles. In the northern one of these two "pan handles," is located the city of Wheeling, its structures extending from the narrow flood plain of the Ohio River nearly to the tops of the adjacent valley slopes, 300 feet above the normal river level. Suburbs extend both along the river to the north and through Wheeling Creek Valley to the south-east. In the river channel, just opposite the city, is an island nearly two miles long and one-half mile wide. This island is connected with the city by two beautiful bridges.

The general region in which Wheeling is situated is a part of the well-marked physiographic province of the Appalachian Plateau and the larger topographic features of the city's setting give typical expression to the province's structure and history. The Ohio River, which is the main drainage outlet of the region, flows in a deep, early-mature valley, whose sides are interrupted by many minor, consequent gorges. A mile or so back from the river the surface of the country has a more rolling aspect, though it is still much dissected by steep tributary valleys.

The hill tops and the upper slopes are covered with a mantle of residual soil. Along the lower slopes of the Ohio Valley are found terraces and other residual masses of glacial sands and

*The writer desires to acknowledge the advice and assistance of Prof. O. D. von Engeln, of the Geology Department of Cornell University, in the preparation of this paper.

gravels filled in by tributary streams from the ice-border to the north during the Ice Age. Along the Ohio Valley bottom as well as in the bottoms of some of the larger tributaries are modern alluvial deposits. The island is an alluvial deposit resulting from the material brought by two large tributaries, each named Wheeling Creek.



Settlement and Growth

Fertile lands in the Ohio Valley early attracted settlers, mainly from Virginia, Pennsylvania, and Maryland. In 1770 the first of these settlers reached the mouth of Wheeling Creek. An elevation between the Creek and the Ohio, identified by Dr. White, State Geologist, as a remnant of one of the river terraces, affording a favorable site, they built cabins and later brought their families. This spot has since become part of the business section of the city.

The Ohio from the first afforded a ready means of transportation. When in 1818 the National Road was built from Cum-

berland, Maryland, to Wheeling (a distance of 200 miles) traffic immediately became very heavy; coaches and freight wagons formed an almost continuous procession, bringing passengers and products to the West. Wheeling shared with Pittsburgh the prosperity of being an upstream terminal of the wagon-borne freight from the industrial East. Much of the freight was destined for points on the Mississippi. At that time 2,000 arks and barges are said to have been plying on the Ohio.

Wheeling in Time of Flood

Owing to the melting of snow and to heavy rains in winter and spring, floods may occur any time from January to May. A gradual melting of snow usually causes two or three periods of high water during which the river overflows its banks, but without causing any serious inconvenience to people or business. Floods occur only after very heavy rains when the mountain snows are melting rapidly or when the ground is already saturated.

There is not an occurrence of the year that causes more excitement in Wheeling than the coming of a very high stage of water. The streets are full of hurrying people, men dressed in old clothes and wearing high boots; men, women and children carrying baskets of provisions, as a sufficient supply must be purchased to last several days. One great necessity, aside from food, is a supply of candles, as gas pipes in flood districts are soon covered. An unusual number of wagons and trucks is seen, most of them carrying goods from the wholesale houses, or pianos from the "island." People stand in groups discussing the latest reports and probability of their correctness. Bulletins are sent out by the Weather Bureau but people do not feel safe until the water is reported stationary at Pittsburgh. As Wheeling usually has 10 feet to 15 feet more than that city it is then known what to expect unless unusual conditions arise.

The furniture in houses that may be flooded is carried to the upper floors. The water seldom remains high for more than 2 or 3 hours, then goes down very rapidly. As the water falls, floors, porches and pavements are cleaned, even lawns are sometimes washed with a hose to prevent the settlement of mud and resultant ruin to grass plots.

Many Island houses have been raised so they will be above flood stage. From much experience, people have learned how to prepare for a flood and there is not a great amount of damage. The greatest loss is that of time in delayed business and extra expense in hauling goods from lower areas.

Wheeling as an Industrial City

Wheeling is a prosperous industrial city of 45,000 people, but it is the center of a region having 120,000 population. It has the advantages of abundant and cheap fuel, both coal and gas, excellent shipping facilities, both by rail and river, and abundance of labor, both skilled and common, consequently many manufacturing enterprises have been located there. The Census report for 1900 gives a list of over four hundred industrial establishments, the chief ones being iron and steel mills, glass works, cigar and tobacco factories, potteries, fruit preserving works, machinery and tool works.

The greatest industry is that of iron and steel. Coal and coke are brought to the city by the Baltimore & Ohio Railroad from the immediately adjacent territory. There are coal mines around the city in all directions and even in the city itself. Iron ore is brought by railroad from lake ports that received it from the Lake Superior mines. The fact that freight rates are the same, raw material as accessible, cheap labor as easily obtained, and living costs for workers lower, enables Wheeling to compete successfully with the mills of Pittsburgh. Cars sent out from Wheeling mills carry export pipe, light rails, bars, nails, tubing, casing, and lately munitions of war.

The Ohio Valley in its upper section forms a natural route of travel in a north-south direction with Wheeling and Pittsburgh at its head. During good stages of water numbers of coal boats pass down the river, their cargoes enroute from Pittsburgh to the Mississippi. The completion of government dams and locks, now under construction, will give the river a nine-foot stage practically all the year.

Fifteen Leading Materials of Manufacture in Our Foreign Trade

The ten great articles of manufacturing materials for which we (U. S.) now rely on foreign countries are: wool, silk, fibres, cotton, rubber, hides, copper, tin, gums, and nitrates, and the five great articles of food imported are: sugar, coffee, tea, cacao, and fruits. Of these ten great articles imported from abroad for manufacturing, our imports in 1917 were $1,060,000,000, against $431,000,000 ten years earlier, and the five great articles of food imported from foreign countries in 1917 were $482,000,000, against $234,000,000 ten years earlier, despite the fact that our islands had practically doubled their contributions of sugar meantime. These fifteen absolutely required articles from abroad for use in manufacturing or for food aggregated in round terms $1,500,000,000 in 1917, against $716,000,000 a decade earlier.

THE CONDITION OF GEOGRAPHY IN THE HIGH SCHOOL AND ITS OPPORTUNITY*

By Carl O. Sauer
University of Michigan, Ann Arbor

IN MOST high schools geography is the most recently introduced science. Physiography, or earth science, which was the first branch of geography to be taught, is almost entirely a development of the last twenty years in the high school. Its successful establishment in secondary schools was due to the development in the nineties of a vigorous group of university physiographers, two of whom, Tarr and Davis, wrote the first elementary texts which combined modern scientific content with a simple and attractive manner of presentation. A period of marked growth in physiography instruction at the turn of the century resulted. Since then, however, a general reaction has set in. In some sections of the country physiography is holding its modest place in the curriculum, in others different forms of science instruction, most particularly general science, are being substituted. The question is therefore: may geography redeem its position by remedying the deficiencies which have been discovered in physiography as taught at present, must geography give way to other branches of science or to a compendium of science as a whole, or will geography meet with better success if some branch other than physiography is chosen?

An inquiry into the reasons for the relative failure of physiography discloses immediately two causes, lack of properly trained teachers and an impression that the course lacks general practical value. For this condition the training schools, principally the universities, are in part responsible. The propagation of the subject has been in the hands of a relatively small number of university men, a much smaller number of instructors than is the case with any other science generally represented in the high school. The number of teachers who could be trained for the secondary schools has therefore been much smaller than in the case of biology, physics, and chemistry. The position of the science in the university has not been determined so much by its value to teachers or to a general education as by its function as a preparation for geology. Consequently the subject has developed chiefly along the lines of dynamic geology with the result that little stress has been put on the broader, geographic applications of the science which fit it for the more general needs of the elementary student. This geologic bias has seriously hampered the development of the subject in the high school.

*Reprinted from Journal of the Michigan Schoolmaster's Club, 1916.

The number of teachers available has been thereby reduced and few of them have gone out into high school work with an emphatic idea of the value of physiography to an understanding of agriculture, forest conditions, transportation, and other types of industry. In large part physiography has not even been taught so as to aid in the appreciation of landscape. With some laudable exceptions therefore the chief non-geologic value of the subject has been its excellent training in the interpretation of scientific observations and in straight thinking, excellent results, to be sure, but hardly sufficient to win the support of high-school principals of today.

Minor causes have contributed to the failure of high-school physiography. In some places, instruction in the subject has not succeeded because there has not been enough local material to illustrate adequately physiographic processes. In Michigan this condition is much less true than in some parts of the Middle West, most particularly in the prairie regions, with their monotonous topography and nearly uniform soils. More commonly the failure has been due to a failure on the part of the teacher to recognize that his laboratory does not consist primarily of maps and models and cross-section paper, but of all out-doors. Field trips require initiative, and the teacher may be overworked without adding this task to his already numerous duties. They also raise new problems of discipline. Properly managed however they are the best stimulus to an understanding and appreciation of the subject. The lack of these first-hand experiences has damned many a physiography course to the monotony of text-book recitations alternating with the tedious busy-work of unprofitable drawing-lessons. Probably in the majority of cases the greatest stumbling-block has been the study of climate and weather, commonly comprising at least a third of the course. As presented in the hands of most inexperienced teachers, this part of the study becomes a veritable nightmare in its confusion of ideas and in its drudgery, and not uncommonly kills the interest in the entire course. For the average class and the average teacher it would be better to eliminate most of the technical meteorology and mathematical geography. Students will have received the important ideas if they can be made to understand the change of the seasons, the relation of relative humidity and evaporation, the causes of rain, and the cyclonic control of weather. With very rare exceptions high school graduates under the writer's observation have had no conception of these most fundamental climatic principles.

Because physiography has not developed the practical values inherent in the subject of geography and because it is also open to the other objections mentioned, other phases of geography have been proposed to take its place. The three forms which have attracted attention are: commercial geography, general principles of geography, and regional geography. Each of these is a study of life in reference to its environment; the emphasis is shifted from the inanimate world to the animate world. It is true that in all of them the best teaching requires training in physiography and also in anthropogeography. But it is also true that these subjects can be presented with fair success by a teacher who is not thoroughly grounded in the technical phases of physiography and that consequently there are less likely to be teaching failures in these lines. These subjects also make a more general appeal to the student because of the lesser amount of technical material, and because in them geographic principles are applied to practical life. From one standpoint these branches are simply the application of physiography to economic conditions. Due to their interesting contents and obvious value, these "humanized" forms of geography are winning their way rather rapidly in the high schools of the country.

The first of these more recent forms of geography to be introduced into secondary schools was commercial geography, the study of the production and exchange of the commodities of commerce. Its development in this country was in part in response to the success of this type of instruction in Europe, most especially in Great Britain. Ground was broken most particularly by the text of Adams, published in 1901. The practical information which this course gives regarding the world's work and the drill which it affords in place geography has won for commercial geography a position not alone in commercial courses but in non-vocational high schools as well. The subject is sufficiently well organized for presentation in the high school, the chief difference of opinion which remains being as to whether it is preferable to make the commodity or the region the unit of study.

The fundamental importance of geography in the grades and its recent successful introduction in advanced form into the universities and colleges leads to the conclusion that it should find representation in some general form in the high school. This need of a high school course in the general principles of geography has been the subject of discussion at various meetings of educators, most notably at the National Education Association, and by the Association of American Geographers. The task was first undertaken by Dryer, who published his High School Geog-

raphy in 1911, and by Salisbury, Barrows, and Tower with their Modern Geography, published in 1913. It is perhaps not too much to say that these two texts mark the most important innovation in high school geography to date. The great service which these pioneer texts are doing in hewing out the path of the "new geography" finds a practical appreciation in the extensive use which they enjoy after having been on the market for only a brief period.

The new type of instruction attempts to give a general view of the relations of life, most particularly of man, to environment. The major part of the content of physiography remains, but life responses are added. In this study physiographic processes are not considered as being of themselves of importance, but they are studied primarily in order to derive a systematic understanding of the environment in which man moves. Those items of physiography therefore which have little or no bearing on life are eliminated. From the standpoint of environmental influences such things as peneplains, subsequent and antecedent streams, eskers, drumlins, ice ramparts, and many others are of little significance. Such land forms, as plains, plateaus, and mountains, and their conditions of life, constitute important topics. As climate is one of the most important geographic factors, climatic influences and types of climate receive a great deal of attention, however with the suppression of much technical meteorological material. As soils determine in a most important way conditions of agriculture, of forest growth, and of transportation, the study of soils and soil influences should be an important part of the instruction in general geography. Mineral resources constitute a group of extensive geographic influences in their bearing on the distribution of population and the nature of industries and should receive adequate attention. It is doubtful whether a high school course in geography can profitably attempt to do much more than to give a working knowledge of climate, of the surface of the land and the processes which shape it, of the ocean, and of the mineral resources in their relations to life. These things can be done efficiently within the limits of time available. Elaborate applications of the sum of these geographic factors upon life introduced complications which may lead to confusion. The texts now published attempt to summarize their geographic instruction by final chapters of this sort. In one instance the distribution of the human species and of plant and animal life and the principles of commercial geography are introduced. In the other instance, such topics are taken up as, the distribution and development of the leading industries of the United States, the distri-

bution of population, and the development of cities. It is questionable whether sufficient time can be given to these broadly-designed summary studies so that they will not cloud the effects of the whole course by the quantity and complexity of their material. The verdict is being formed now in many class-rooms. In the meantime the suggestion is offered that after the relationship between individual geographic factors and life has been properly established the work may be simply and adequately summarized by work in home geography, the locality in which the course is given being considered as the unit of geographic study. Here is a splendid opportunity to plan profitable field trips and to view the influence of the sum total of geographic factors upon the home of the student.

Experiments are being made at present with courses in regional geography in the high school. Their principal purpose is to keep fresh and to expand the geography which has been learned in the grades. An objection to this type of instruction is that it is substantially a repetition of grade school work and introduces no new view-point. Place or regional geography can be taught very successfully in connection with both commercial geography, especially if taught on the regional plan, and with general geography as it has been outlined above. It is entirely appropriate that in the teaching of either type of high school geography a number of regions be chosen to illustrate geographic principles. If this is done all the place geography desired may be introduced without running the risk of making it a wearisome, encyclopaedic sort of study.

The salvation of geography in the high school lies in the development of general and commercial geography. Of the two the general course will fill by far the more responsible position in the curriculum. It includes all the most important teachings of physiography, and its interest is heightened by its application to the living world and especially to human activities. Its nature is cultural in the fullest sense in that it tends to give a world outlook. It should have as its great laboratory the home environment, which may be used quite as fully and successfully as in physiography or biology. General geography should provide as well a review in attractive form of locational geography. Is not this the solution of the general science problem? Here is a course of the broadest possible scope, thoroughly scientific in its content, consistent in its organization, linking earth science and biology, and with manifold applications to economic conditions. If all of those who have the interest of geography at heart will cooperate loyally they can assure in time the general recognition

of this course as a fundamental elementary science for the high school. Physiography will maintain itself as a more advanced elective course. Commercial geography will have at the least an important place in its proper vocational department. By giving our support to this grouping of the field of geography we can win for it its deserved place in secondary education and help to eliminate some of the will-o'-the-wisps that at present are disturbing the science situation in the high school.

NEWFOUNDLAND

NEWFOUNDLAND is a British colony occupying an important and commanding position off the eastern coast of North America, it includes not only the island by that name but also the east coast of Labrador; and by having refused to join the Dominion of Canada it still remains a colony of Great Britain. The island has an area of approximately 43,000 square miles and a population of about 225,000 people, or less than six inhabitants to the square mile. Due to the fact that the country is situated in latitude 48 to 50 degrees north, is in the direct path of the westerly winds from the continent, is influenced by the cold Labrador current from the north, has a very small amount of agricultural land, and is inhabited by a more or less backward people, Newfoundland has developed slowly. The coast has experienced intensive glaciation and deep fiords penetrate the island for 50 to 65 miles.

Agriculture, forestry, and manufacturing are carried on to a very limited degree, and they have up to the present time proved to be of small importance. By far the two most important industries of Newfoundland are fishing and mining, of which the former engages a very large per cent of the population. The fisheries of Newfoundland have long constituted the chief source of wealth of the island. The most important fishing is the cod fishing on the banks nearby; this forms eighty per cent of the entire industry and is more important here than in any other place in the world. The average annual export of dried cod fish is valued at between five and six million dollars. Besides cod fishing the lobster, herring, salmon and seal fisheries are important. St. Johns is the foremost fishing port.

It was not until recent years that Newfoundland was known to possess mineral deposits of great value. Copper was first discovered at the small fishing village of Tilt Cove in 1857. Sometime later a mine was opened, and in fifteen years 50,000 tons of copper ore valued at $1,572,154 and nickel valued at $32,740 was

mined. Iron mining has of late far surpassed copper mining; the principal deposits are at Bell Island in Conception Bay. The ore deposits are found in the strata that dip beneath the sea and thus the mines extend out under the ocean. In 1912 1,251,000 tons of iron were exported. This ore is taken for the most part by the large steel industries of Nova Scotia, but some of it reaches the United States and England.

The transportational facilities play a unique part in the modern development of the island. There are in operation somewhat more than 700 miles of Government railroads and 47 miles of private lines. Communication between various points of the coast and between the islands and the continent is usually maintained by a fleet of eight steamers, each of which connects with some point on the railway.

The government of Newfoundland is administered by a governor, assisted by an executive council of nine members, a legislative council of twenty members, and an elected house of assembly consisting of thirty-six members. E. M. Jones.

A TEST IN GENERAL GEOGRAPHY

SOME weeks ago the writer gave the following test to a class of two hundred and fifty college students who are now taking their first course in college geography. The purpose of the test was to reveal to the instructor something of the geographical content of his students' minds, and to reveal to the students the quality of their own geographical knowledge.

The questions were as follows:

1. On what river is each of the following? (1) Cincinnati, (2) Richmond, (3) Detroit, (4) Philadelphia, (5) St. Louis?
2. In what country is each of the following? (1) Buenos Aires, (2) Antwerp, (3) Calcutta, (4) Venice, (5) Halifax?
3. Give your best estimate of the distance between: (1) New York and Boston, (2) Chicago and New Orleans, (3) New York and Liverpool, (4) Paris and Berlin, (5) Berlin and Petrograd.
4. Which of our states is the largest producer of: (1) coal, (2) iron ore, (3) manufactured goods, (4) fruits, (5) automobiles?
5. In what country is each of the following rivers? (1) Rhone, (2) Ganges, (3) Clyde, (4) Tiber, (5) Volga?
6. Give your estimate of the area of: (1) Your own state (name it), (2) Japan, (3) United States, (4) British Isles, (5) Germany.

The results of the test were not in any sense surprising, inasmuch as similar tests are given each year and always with the same results. The average grade attained by the members of the class was between 40 and 50 per cent, while a considerable number of students fell below thirty per cent, and this in spite of the fact that questions three and six were treated with great liberality in grading. In the first hundred papers question No. 1 resulted as follows: Eight students failed to put Cincinnati on the Ohio river. Nineteen out of the hundred failed on St. Louis; sixty-five failed on Detroit; eighty failed on Philadelphia, and eighty-nine on Richmond. The first correct answer to this question was found in the fifty-ninth paper marked. The two cities which fared worst at the hands of the students were Philadelphia and Richmond, both of which cities are of such historical interest that students must have had occasion to study them in their history classes.

In question 2 considerably less than one-half of the students could tell even in what country Buenos Aires is, despite the fact that it is the largest city in the southern hemisphere. Antwerp was placed in Holland more frequently than in Belgium by the students. Venice fared well, but Halifax was placed in Denmark, England, India, Labrador, Newfoundland, Ontario, Australia, Norway, South Africa, and New Zealand.

Question 3, calling for estimates of distances between cities, was the most satisfactorily answered of all the questions. Taking the first ten papers marked, the distance was given as follows: Distance from New York to Boston: 200 mi., 600 mi., 400 mi., 200 mi., 500 mi., 400 mi., 200 mi., 60 mi., 150 mi., 9,000 mi. (Correct answer, 1,000 mi.)

Distance from Chicago to New Orleans: 500 mi., 1,000 mi., 5,000 mi., 800 mi., 900 mi., 1,000 mi., 700 mi., 800 mi., 210 mi., 19,000 mi. (Correct answer, 900 mi.)

Distance from New York to Liverpool: 3,000 mi., 2,200 mi., 3,000 mi., 2,500 mi., 3,000 mi., 2,000 mi., 585 mi., 2,000 mi., 6,000 mi., 20,000 mi. (Correct answer, 3,000 mi.)

Paris to Berlin: 500 mi., 600 mi., 500 mi., 700 mi., 150 mi., 150 mi., 250 mi., 300 mi., 10,000 mi. (Correct answer, 600 mi.)

Berlin to Petrograd: 350 mi., 1,500 mi., 700 mi., 800 mi., 750 mi., 800 mi., 1,000 mi., 105 mi., 200 mi., 18,000 mi. (Correct answer, 1,000 mi.)

Question 4, asking which of our states is the largest producer respectively, of coal, iron ore, manufactured goods, fruit, and automobiles, fared best with respect to automobiles, over ninety per cent of the students stating correctly that Michigan is the

leader. California, for fruits, also fared well. A very wide range of opinion concerning the leading state in general manufacturing was shown, many students believing that Wisconsin is the foremost manufacturing state. The honors were about equally shared between Massachusetts, Ohio, Illinois and New York; the last named being correct. Most of the students assigned correctly to Pennsylvania the foremost position in coal-mining, but only fourteen per cent gave correctly the leading producer of iron ore. This seems somewhat strange in view of the fact that Minnesota produces more than one-half of the iron ore mined in the United States and as much iron ore as any foreign country.

Question 5, asking in what country the Rhone, Clyde, Volga, Ganges, and Tiber respectively are averaged about fifty per cent. The Tiber for example was placed in Asia, France, India, Palestine, Africa, Siberia, Persia, Germany, Norway, Russia and Arabia. The Rhone was placed more frequently in Germany than in France.

The least satisfactory question of all was No. 6. The answers given reveal conclusively that even the best students who pass through our schools seldom get anything approaching an accurate idea of the area of their own country, or of other leading nations of the world. It is not to be expected that students will memorize many of these; that would be foolish. It may reasonably be expected, however, that they will know the approximate area of their own state and country and of one or two other countries. Knowing these they will be able to estimate with some degree of nearness the areas of other nations which count most in the worlds' affairs. The following answers indicate how little basis for estimating the areas of countries college students possess. The areas of the United States, of the British Isles, and of Japan were given by various students as follows:

United States	British Isles	Japan
8,000,000 sq. mi.	59,000 sq. mi.	50,000 sq. mi.
500,000 sq. mi.	4,000 sq. mi.	2,500 sq. mi.
100,000 sq. mi.	400 sq. mi.	20,000 sq. mi.
110,000,000 sq. mi.	40,000 sq. mi.	40,000,000 sq. mi.
3,000,000 sq. mi.	10,000,000 sq. mi.	50,000 sq. mi.
100,000 sq. mi.	30,000 sq. mi.	6,500 sq. mi.
800,000 sq. mi.	60,000 sq. mi.	750 sq. mi.
15,000 sq. mi.	1,000 sq. mi.	100,000 sq. mi.
15,000,000 sq. mi.	1,000,000 sq. mi.	500 sq. mi.
75,000,000 sq. mi.	228,000 sq. mi.	2,000 sq. mi.
60,000 sq. mi.	5,000 sq. mi.	10,000,000 sq. mi.

This test, like similar tests given in other universities and normal schools, brings out how little reliable geographical knowledge students bring with them to the higher institutions, and shows why the beginning course in Geography in normal schools and colleges must take up the most elementary matters, in fact repeat much of the subject matter taught in the grade school. The difficulty seems to lie in the fact that pupils learn temporarily an enormous number of different facts without being made aware of any large difference in the relative importance of the facts, and within a short time the facts that are worth remembering and those that are not, all fade away together. R. H. W.

CLIMATIC NOTES ON THE BRITISH ISLES

The British Isles lie between 50° and 61° N. latitude; that is, they are entirely north of the northern boundary of the United States. London is farther north than any large Canadian City, and Northern Scotland is in the same latitude as the center of Hudson Bay, which is ice-bound 8 or 9 months each year.

Icebergs are not seen within hundreds of miles of the British Isles, while, on the western side of the Atlantic, they are seen off the coast of New England, 20° farther south.

So far north are the Shetland Islands that they have only 6 hours of daylight on Dec. 21, but have 18¾ hours on June 21. Even London has only 7¾ hours of daylight on Dec. 21.

So great is the warming effect of the North Atlantic Drift and the winds that blow from it, that the British Isles are 30° warmer in January than the average for their latitude.

Though London is 800 miles farther north than Chicago, it has the same mean annual temperature.

In the English winter, the heat derived from the sea is more effective than that derived from the sun, and the isortherms run north and south; that is, the temperature diminishes toward the east instead of toward the north.

Weather in the British Isles is very changeable; a change of 40° in temperature in 48 hours is not uncommon.

All parts of the islands are well supplied with rainfall, but the variation is very great; for example, 200 inches of rain fall in a year on highlands near the west coast of Scotland; Ben Nevis in Scotland gets an average of 160 inches a year, while a region only 70 miles east receives an average of but 25 inches a year; a part of eastern England receives less than 25 inches a year.

Unfortunately, spring is the driest season of the year for the British Isles, and fall is the wettest season; this is unfavorable to the growing of cereals.

The northwest part of the British Isles has rain on an average of 7 days in every 10; in the southeast, rain falls on 5 days in every 10. There are places which have rain on an average 27 days out of every month.

Snow falls in every part of the islands, and has fallen in London in July. During some entire years, however, no snow falls in London, and the city has snow on an average for only 14 days a year; even Edinburgh in the latitude of southern Hudson Bay, has only 21 snowy days a year. In southern England snow rarely lies on the ground longer than one day at a time. Snow falls every month in the year on high mountains in Scotland.

In general, the British Isles have a very high proportion of cloudy days. "The British Isles lie near the cloudiest part of one of the cloudiest belts on the earth."

OUR FOREIGN TRADE AFTER THE WAR

WHAT is the reason for the wide and growing interest in cultivating foreign fields shown at this moment by our shrewdest manufacturers? It is because American manufacturers realize that we will simply have to get foreign business after the war to provide an outlet for our over-production when war orders stop. We have greatly increased our manufacturing capacity in this country. We are catering not only to the military consumption of every kind of goods, but we are supplying the enormously increased consumption of our people here at home. It is hard to realize how many kinds of goods, even of what ordinarily are called luxuries, the war forces are consuming. And back of the fighting men, for months we have been providing for millions of workers devoted to the making of munitions and other war goods. Moreover, the billions of wages going to working people who never earned anything like so much before, and to hundreds of thousands who never earned any wages before, in this country, have created a consumption of goods right here at home the like of which neither this nor any other country ever before knew. Great manufacturing plants have added new buildings and new machinery, new plants have put up smokestacks everywhere in places where we never saw them before, and in tens of thousands of small shops in our cities we have expanded the production of goods to meet this home demand for the necessities and luxuries of ordinary life.

What is going to happen when the war ends? How are we going to dispose of the output of this tremendously increased industrial establishment? In the opinion of many of our leading

manufacturers and business men there is going to be a well-defined effort made for foreign markets. They realize that in the development of a strong, vigorous export trade policy lies the security of our future prosperity. Our people are going to sell abroad with the same spirit they sell here. They are going in to win. They will win. American export business has never yet failed in any market where it went with the same spirit of determination, initiative, persistence and resourcefulness that is typical here at home. [E. A. Goff in *The Americas.*]

THE GROWTH OF THE MINING AND METAL INDUSTRIES IN FRANCE

ONE OF the most important questions which at the outset of the war, engaged the attention of those who were entrusted with the safety and welfare of France, was the supply of cast-iron and steel. In fact, just when the manufacture of war material required enormous quantities of these metals, our country, owing to the German invasion, was deprived of her most important fields of iron-ore, as well as the chief foundries for transforming this ore. The North African mines were immediately requisitioned. Iron-ore was purchased from Spain, steel from America and England. The foundries which had been closed since August 1914, for want of hands, were opened again by degrees. Many furnaces from glass-works were adapted for metallurgy; and the great mineral wealth of the French sub-soil, which till then had been turned to little account, was exploited. The results of these efforts soon made themselves felt. Before the war, out of the 5 million tons of coke required every year, France had to get more than 2 million from Germany. At the present time she can supply her own needs, and does not need to apply abroad for any coke. Supposing we take 100 as representing the output of cast-iron in September 1915, it rose progressively to 176 (in January 1916), 250 (July 1916), and to 280 (January 1917). For steel the same progression is noticeable. If the production of Martin and ordinary steel is represented by 100 for January 1915, it has reached now 155 for Martin steel, and 210 for ordinary steel.

New blast furnaces, the first of which has been recently inaugurated, are in themselves 100 ft. high. They can produce 400 *tons a day, which is the largest output obtained in Europe up till the present day.*

NEWS NOTES

The Cleveland School of Education, conducted jointly by the Western Reserve University and the Cleveland Normal School, has recently issued its list of extension courses including those in Geography. Prof. W. M. Gregory of the Cleveland Normal School is in charge of the four extension courses in Geography which are offered to Cleveland teachers. These courses are: (1) Elementary School Geography, (2) Industries of the United States, (3) Advanced Geography (Europe and South America), (4) Junior High School Geography. All of these classes meet either on Saturday forenoons or after hours on school days.

It is announced that Walter S. Tower and J. Paul Goode of the Department of Geography, University of Chicago, have been advanced to full professorships. Miss Mary J. Lanier formerly of Chicago University has been appointed Associate Professor of Geography in Wellesley college.

The Nebraska Council of Geography Teachers continues to issue its bulletins, under the editorship of Prof. W. G. Bishop. The last bulletin contains a valuable list of Material Helpful in Teaching the Geography of the United States and her Possessions. The list is prepared by Prof. J. T. Link of Seward, and is made up of six groups of reference books: (1) History as influenced by Geography, (2) Physiography, (3) Regional Geography, (4) Industrial and Commercial Geography, (5) Possessions of the United States, (6) General References. The bulletin announces the coming of Prof. A. P. Brigham who spoke at several meetings of the Nebraska State Teachers Association held about the first of November.

Miss Zonia Baber, head of the department of Geography in the school of education, University of Chicago, has recently brought out Excursion Bulletin Number 3 of the Geographical Society of Chicago. The Bulletin is published by the University of Chicago press and deals with the region known as Stony Island, a geological remnant within the present boundaries of Chicago. The bulletin has sixteen pages with fifteen illustrations. It discusses the geological history and physiographic development of this interesting region.

Most people know that Minneapolis is the leading flour milling city of the United States; few have any idea what the second city in rank is. Not so very long ago, New York City held second place in this industry; now it is Buffalo. Minneapolis grinds about 18 million barrels of flour a year; Buffalo, the second city, grinds 5½ million barrels; Kansas City, 3 million.

CHICAGO MEETING OF THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS AND OF THE ASSOCIATION OF AMERICAN GEOGRAPHERS

IT HAS been the custom to hold the annual meeting of the National Council of Geography Teachers in connection with the annual meeting of the Association of American Geographers. The custom will again be followed this year. The Association of American Geographers will meet in Rosenwald Hall, University of Chicago, Thursday and Friday, December 27th and 28th and also Saturday morning, December 29th if the length of the program shall require it. The meeting of the National Council of Geography Teachers will be held in Rosenwald Hall, University of Chicago, Wednesday afternoon and evening, December 26th. The program follows:

WEDNESDAY, DECEMBER 26.

1:45 P. M. *Geography Teaching in War Times—Its Responsibilities and Opportunities.—Speaker not secured.*

2:45 P. M. *Our Most Pressing Problems.*
The East, Robert M. Brown, Providence, R. I.
The Middle West, R. H. Whitbeck, Madison, Wis.
The West, James F. Chamberlain, Los Angeles, Cal.
The South, A. E. Parkins, Nashville, Tenn.
Leaders in Discussion:
Charles R. Dryer, Terre Haute, Ind.
Mabel Stark, Normal, Ill.
Mark Jefferson, Ypsilanti, Mich.
Geo. J. Miller, Mankato, Minn.

7:30 P. M. *Report of Executive Committee, and report on work of the Council during the past year—Geo. J. Miller, Sec.*
Discussion.

8:00 P. M. *Report of Committee on Normal School Geography.—Sumner W. Cushing, Salem, Mass.*

The meetings of the Association of American Geographers will be of interest to all teachers of geography, and of particular value to those who are engaged in teaching in high schools, normal schools, and colleges. It is hoped that as many as possible of the directors of the various State Councils will attend both the meetings of the National Council and of the American Geographers. This is the third time in fourteen years that the Association of American Geographers has met as far west as Chicago. Owing to the fact that the majority of the members live in the eastern states, more than one-half of the meetings may be expected to be held in the East. We therefore urge middle western geographers and teachers of geography to avail themselves of this opportunity to attend the meetings in Chicago this year.

MEETING OF WISCONSIN GEOGRAPHY TEACHERS

THE annual meeting of the Wisconsin Council of Geography Teachers took place in Milwaukee on November second. Reports of the officers indicated a healthy growth in membership during the past year. The old officers were re-elected. A plan is under way for securing in every larger school system in the state, a leader in Geography. Letters are being sent out to the superintendents of schools asking them to select one of their most enthusiastic teachers of Geography to act as the leader in geography in their respective schools. It is hoped to have a representative of the State Council in nearly every town and city in the state. These representatives will endeavor to promote interest in geography teaching in their schools by assisting other teachers in securing geographical material, keeping them informed about geographical activities in other parts of the state and country, and in a general way stirring up interest in geography-teaching.

For the first time the State Teachers Association of Wisconsin has accorded to geography a separate section, and an excellent program was presented this year. The geography section was particularly favored in having addresses by the chairman of the committee of High School Inspectors of the State University and one of the High School Inspectors of the State Department of Public Instruction. Both of these inspectors went on record as favoring the teaching of geography in all Wisconsin High Schools. The state department is preparing a course of study in geography for the high schools of the state, and there are the best of reasons for believing that increased attention will be given to geography in the high schools of the state. In addition to the addresses by the two high school inspectors, papers were presented on Geography Made Real by Field Studies, Miss Jennie Hall; Logical Attack of Geography in Secondary Schools, Lucius T. Gould.

GEOGRAPHY IN ILLINOIS

THE largest influence for or against the development of geography teaching is the attitude of the normal schools and of the principal university in any state. In the states west of the Alleghanies the state university is usually the most influential institution among the colleges. But even more important than the influence of the universities is that of the group of normal schools in a state. While the best normal schools have trained geogra-

phers in charge of the departments of geography, it does not follow that geography is given a reasonable opportunity. At the December meeting of the National Council of Geography Teachers in Chicago, Professor Cushing's committee will present a report on Geography in the Normal Schools. The National Council hopes gradually to create a better condition, so far as geography is concerned, in the normal schools.

All of our readers have noted the evidences of geographical activity in several of the normal schools of Illinois. The vigorous chairman of the Illinois State Council of Geography, Miss Mabel Stark, formerly a teacher in the Normal School at Normal, Illinois, has been made head of the Department of Geography of the De Kalb Normal. The valuable lists of Geographical Material obtainable free or at small cost, published in this Journal, were prepared by the librarian of the Charleston, Ill., Normal School. All of the Illinois normal schools have excellently trained teachers in charge of the work in geography, as have also the School of Education of the University of Chicago, and the Chicago Normal College. Added to all this is the strong department of Geography of the University of Chicago, and the growing departments in Northwestern University and in the University of Illinois.

We print herewith the list of geographical courses offered by the Macomb, Ill., Normal School. When a normal school reaches the point of offering fifteen courses in geography given by instructors who have received prolonged training for their work, there is cause for congratulation.

GEOGRAPHY

(Courses 1-6 given by E. L. Jay.)

Geography 1—Physical Geography. A study of Physiographic features, winds, rainfall, soil, etc., in their economic relations. Two double periods are spent in laboratory each week, and three single periods in recitation. Text: Salisbury, Barrows and Tower's Modern Geography. *One credit.*

Geography 2—Regional Geography. An intensive study of North America and the United States on the basis of physiographic regions. The industries and life of each region are studied as a result of geographic conditions. Text: Tarr and McMurry's New Geography, I and II. *One credit.*

Geography 3—Commercial Geography. Emphasis is placed upon the rational interpretation of the facts of commerce and trade rather than upon unrelated facts. The principles of economics which govern production, transportation, and consumption are studied, as illustrated by the great commercial nations of the world. Text: Smith's Commerce and Industry. *One credit.*

Geography 4—Geography of Illinois. An intensive regional study of the State of Illinois, its topography, climate, soils, minerals, and their relation to the development of agriculture, manufacturing, and commerce. No text. *One credit.*

Geography 5—Geography of South America. A detailed study of the life and industries of South America in their relation to soil, temperature, rainfall, natural resources, and character of the people. Emphasis will be given to future commercial possibilities especially in relation to our own country. Text: Enoch's Republics of South America. *One credit.*

Geography 6—Geography of Europe. A detailed study of the life and industries of Europe as determined by geographic conditions. No text. *One credit.*

(Courses 20-29 given by Herbert Bassett.)

Geography 20—A consideration of the aims, phases and methods in Geography.) Research work and field trips. Seven periods per week. Prematerial for the course of study in this subject. Observation and discussion in the work in geography in the model school is a vital part of this course. Text: Sutherland's The Teaching of Geography. *One credit.*

Geography 21 (An advanced course in the interpretation of local geography.) Research work and field trips. Seven periods per week. Prerequisite, a course in physiography or geology.

Geography 23—Physiography. An advanced course in physical geography. Prerequisites: A fair elementary knowledge of botany, zoology, chemistry and physics. Open only to prepared students, and will not be given to fewer than ten students who will be in attendance the entire term. Text: Salisbury's Advanced Physiography. *One credit.*

Geography 24—Meteorology. This course treats of the atmosphere, its composition, temperature, pressure, and movements; the great wind zones, and their relation to rainfall. Some attention will be given to mathematical geography. Text: Waldo's and Milham's Meteorology. *One credit.*

Geography 25—Agricultural Geography. In this course a study is made of the agricultural products of the world, and of their distribution as determined by geographic factors, such as rainfall, temperature and soil. Text: Smith's Industrial and Commercial Geography. *One credit.*

Geography 26—Conservation of Natural Resources. Minerals, forests, waters, and soils are great natural resources upon which mankind depends for existence. These resources should be so used by the present generation that they may continue for future generations. Text: Van Hise's Conservation of Natural Resources in the United States. *One credit.*

Geography 27—Original research work and term theme in addition to outline of course as given under Geography 4. Cannot be taken for credit if one has credit in Geography 4. *One credit.*

Geography 28—Original research work and term theme in addition to outline of course as given under Geography 5. Cannot be taken for credit if one has credit in Geography 5. *One credit.*

Geography 29—Original research work and term theme in addition to outline of course given under Geography 6. Cannot be taken for credit by one who has had Geography 6. *One credit.*

GEOGRAPHICAL ACTIVITIES IN NEW ENGLAND

AS OUR readers know, Massachusetts was active last year in building up its State Council of Geography Teachers and the National Council of Geography Teachers. That activity is continuing this year. The annual meeting was held in Boston on November 17th, and was addresseb dy Professors A. P. Brigham, R. E. Dodge, W. W. Atwood and others. At the annual meeting of the Essex County Teachers' Association, November 2nd, Prof. R. H. Whitbeck addressed two meetings with a total attendance

of about two thousand teachers, dealing with "Matter and Method in Elementary Geography" and "Geography and General Science." On the same day Prof. Elizabeth Fisher of Wellesley College addressed a meeting in Worcester on the subject of Geography Teaching. Prof. Whitbeck also lectured on Geography at Wellesley College and the Salem Normal School, addressed two audiences of teachers in Providence, one in New Haven, one in Hartford, and the Normal School in Farmington, Maine.

The Rhode Island teachers are at work actively in geographical lines and Prof. Robert M. Brown of the Providence Normal School is carrying on extension courses in geography which reach nearly every part of the state.

In Connecticut, Prof. Charles E. Pratt of the New Britain Normal School, chairman of the Council of Geography Teachers, is pushing the organization of the Council with vigor. Under his management large sections of teachers were addressed upon the subject of Geography Teaching in both New Haven and Hartford. Some forty or fifty teachers united with the State and National Councils. In his circular Prof. Pratt announces as follows:

"The Connecticut Council will organize various committees to investigate and report at its meetings on such topics as the following:—

1. The Local Geography of a Selected Community.
2. Type Lessons for Grades III and IV.
3. " " " " IV, V and VI.
4. " " " " VII and VIII.
5. Comparison of Geography Courses within your County.
6. " " " " " " State.
7. Organization of a Geography Course for Rural Schools of Conn.
8. " " " " " City " "
9. .....

It will be the aim of our Council to print the most helpful reports for free distribution among its members and for use in our schools.

With the large number of interested and efficient geographers in New England, it may be expected that the work of rejuvenating geography teaching in New England will proceed actively."